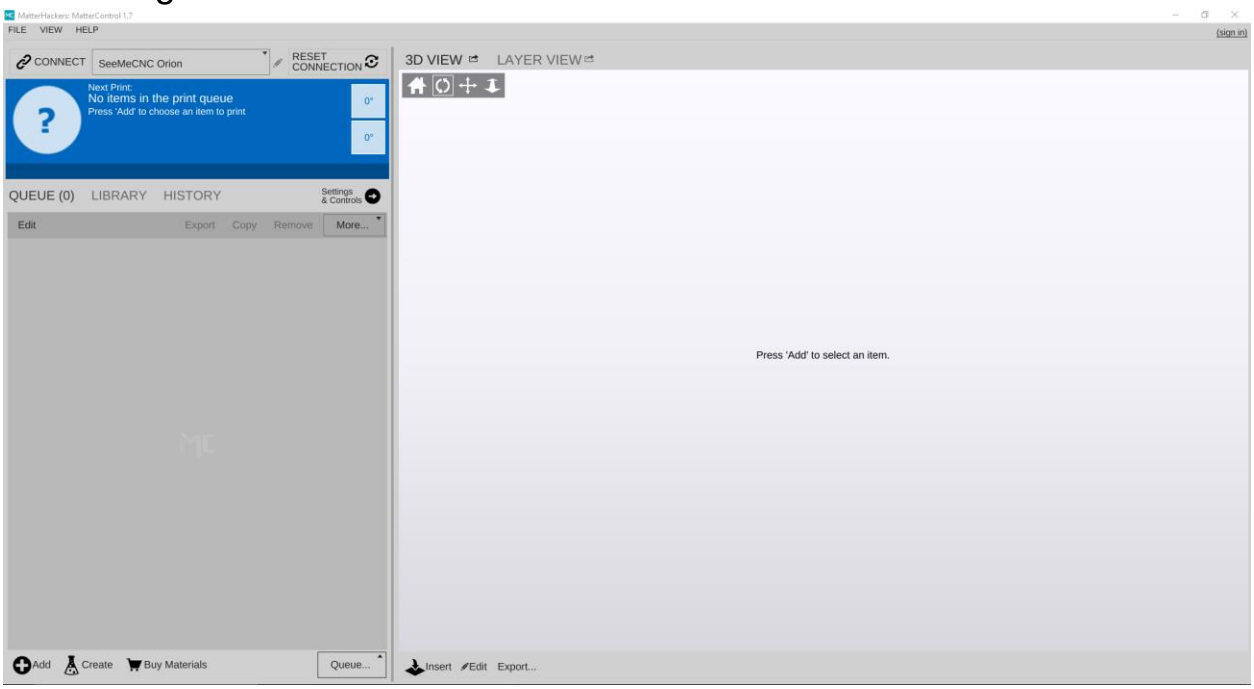
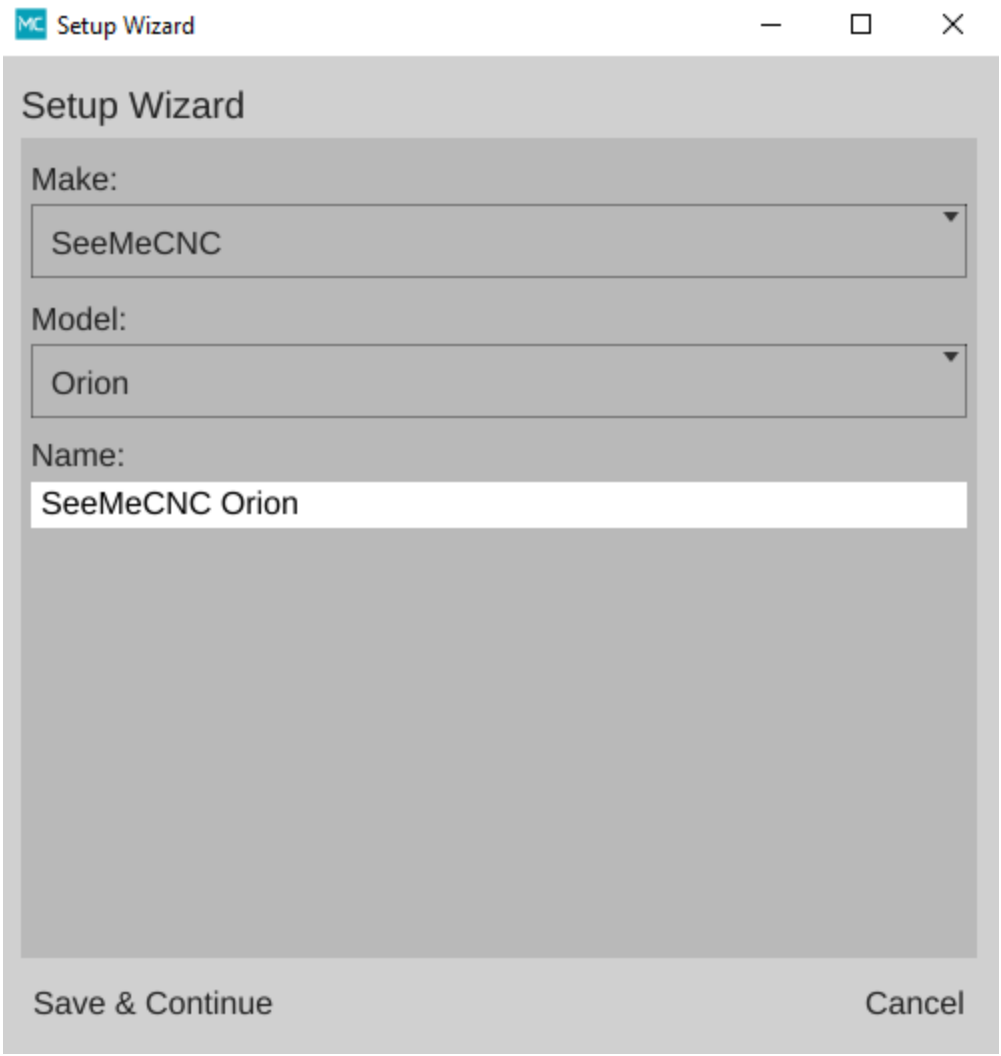
Matter Control Slicing Software Guide

1. After downloading MatterControl from their website (http://www.mattercontrol.com), run the setup .exe file and the installation wizard will walk you through the installation process. Once matter control is installed, open MatterControl and you should see something like this:



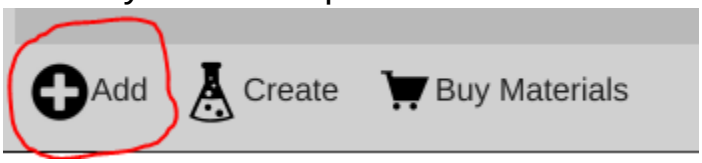
This is the MatterControl interface that we can use for slicing our 3D models.

2. The first step is to set up the printer we want to use, which is the SeeMeCNC Orion. Click on File in the top left and select “Add Printer”, bringing up the Printer Setup Wizard:

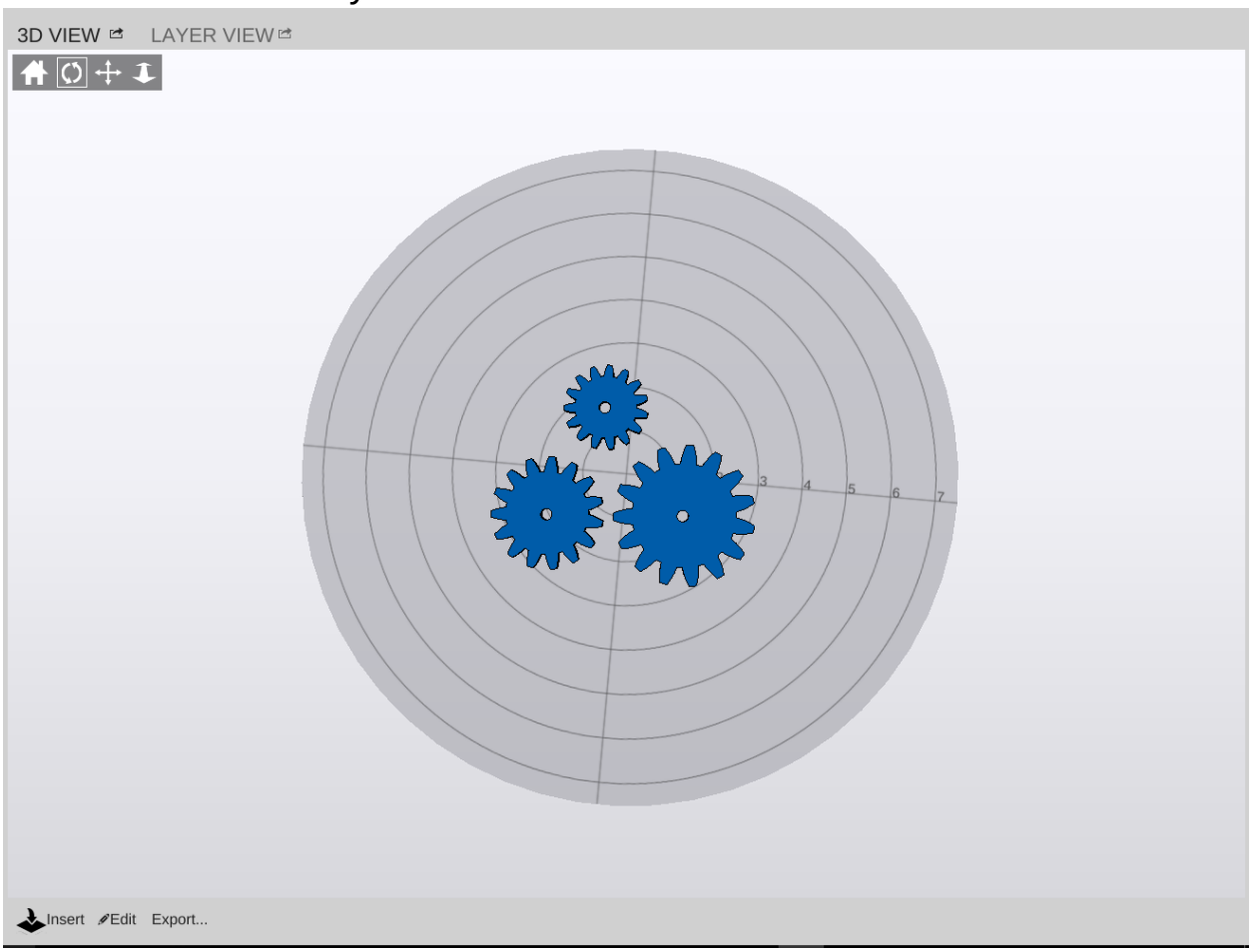


For Make, we should select SeeMeCNC and for Model, select Orion. Click on Save & Continue. This will set up all our slicing and printer settings, taking care of most of the work for us.

3. Now we are ready to slice a 3D model for printing. Once you've got your .stl file ready, click on "Add" in the bottom left corner and select the .stl you want to print.

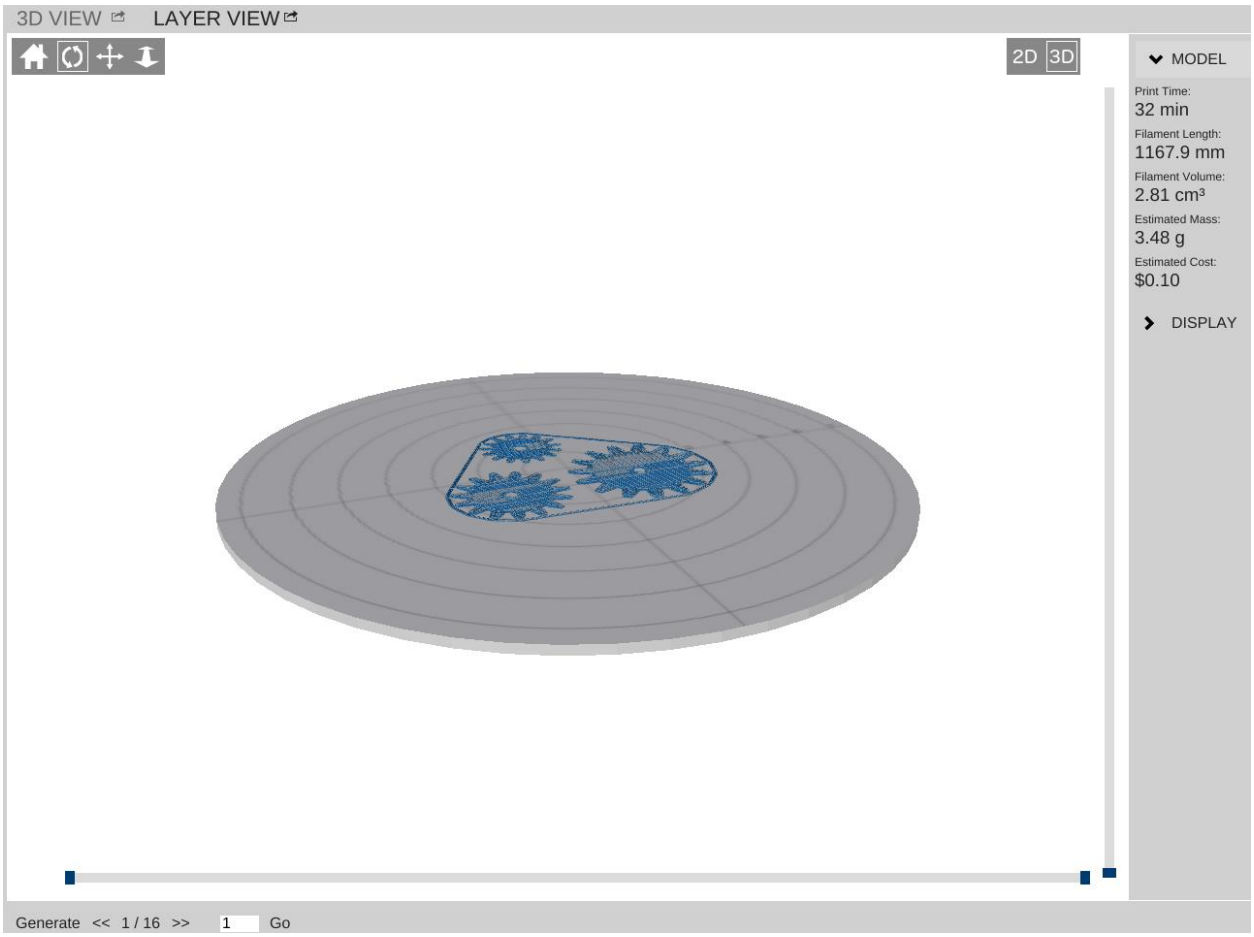


4. You should now see your .stl in the “3D View” window:



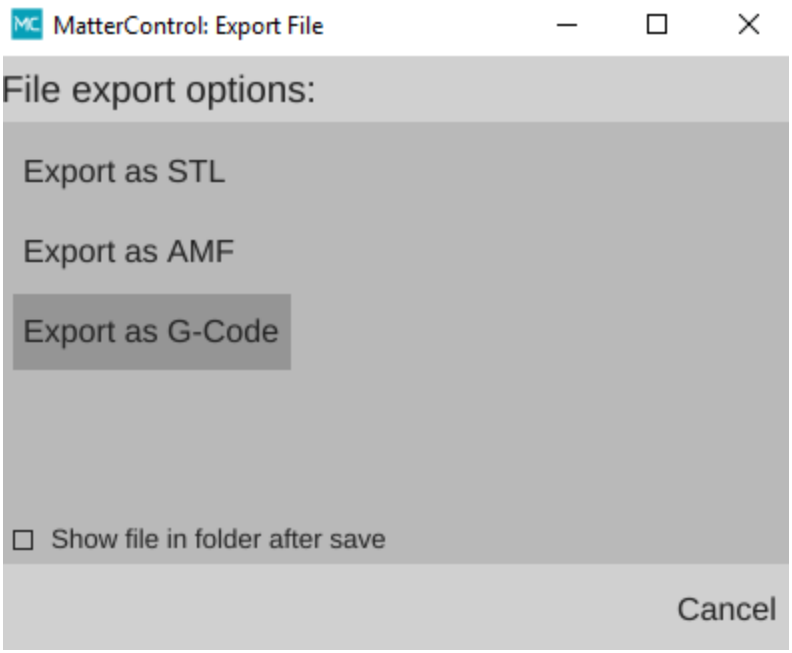
The grey circle is a scale model of the printer bed; the numbers 1-7 are measurements in centimeters (the printer bed has a radius of 7.5cm). We can click on the “Edit” button (seen at the bottom left of the above image) to rotate and scale our part further, if necessary. Note: Always make sure your gears are aligned (flat) to the bed, otherwise the printer WILL try to print your gears floating in mid-air, which will fail.

5. Once you are happy with how your part looks, click on “Layer View” and press the “Generate” button. It will take some time for the slicing software to perform the necessary calculations; once it is done, you should see something like this in the layer view window:



The layer view shows exactly what is going to be printed, so make sure the layer view matches what you are expecting to print. Another piece of important information is the “Print Time”, listed here as 32 minutes. When you book your printing sessions for gears, you have exactly one hour (and no more) to print per session, so you can use this to check ahead of time and see how long your parts will take to print. As we can see, printing multiple gears doesn’t take much time, so make sure to have multiple gears ready to print when you book a session.

6. We’re almost done. Once you are happy with your part and are ready to print, click on the “Export” button to bring up this menu:



The printers in the lab can only ready G-Code, so you'll always want to select "Export as G-Code" if you're printing the part. At this point, you would save the G-Code to one of the SD cards in the EPIC lab for printing. The lab has many USB SD card readers that you can use with your laptop to save the G-Code for printing.

And that's it! As you can see, setting up your project parts for 3D printing is a straightforward process. Of course, if you ever have any issues with this process, you can always ask the EPIC IAI for help with your prints.